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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/573,299	01/08/2007	Irving I. Dardik	061179.020200	9560
22191 7590 12/17/2008 GREENBERG TRAURIG, LLP 2101 L Street, N.W. Suite 1000 Washington, DC 20037				
EXAMINER WHITTINGTON, KENNETH				
ART UNIT 2862		PAPER NUMBER		
NOTIFICATION DATE 12/17/2008		DELIVERY MODE ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

dcpatdkt@gtlaw.com  
andersonn@gtlaw.com

### Office Action Summary

**Application No.**

10/573,299

**Applicant(s)**

DARDIK ET AL.

**Examiner**

KENNETH J. WHITTINGTON

**Art Unit**

2862

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 October 2008.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-8 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 31 October 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO/5508)  
Paper No(s)/Mail Date \_\_\_\_\_  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

The Amendment filed October 31, 2008 has been entered and considered. In view thereof, the objections to the Abstract and Drawings are withdrawn.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Pigeon (US4061968).

Regarding claim 1, Pigeon discloses an apparatus for eddy current inspection, the apparatus comprising:

an induction probe having an input operative to receive a train of pulsed electrical packets, a cluster of pulses being superimposed on each packet (See Pigeon FIG. 4, items 20 and note disclosure related thereto); and

wherein each pulse in the cluster of pulses has an amplitude that is proportional to an instantaneous amplitude of a major wave associated with the train of pulsed electrical packets, and wherein each pulse in the cluster of pulses has a frequency that is proportional to an instantaneous frequency of the major wave associated with the train of pulsed electrical packets (See FIG. 4, items 26, 28, 30 and disclosure related thereto, particularly col. 6, lines 1-9).

Regarding claim 2, Pigeon discloses an apparatus for eddy current inspection, the apparatus comprising:

an induction probe operative to emit a magnetic field corresponding to a train of pulsed packets, a cluster of pulses being superimposed on each packet (See Pigeon FIG. 4, items 20 and note disclosure related thereto); and

wherein each pulse in the cluster of pulses has an amplitude that is proportional to an instantaneous amplitude of a major wave associated with the train of pulsed packets, and wherein each pulse in the cluster of pulses has a frequency that is proportional to an instantaneous frequency of the major wave associated with the train of pulsed packets (See FIG. 4, items 26, 28, 30 and disclosure related thereto, particularly col. 6, lines 1-9).

Regarding claim 3, Pigeon discloses a method for eddy current inspection, the method comprising:

generating a train of pulsed electrical packets, a cluster of pulses being superimposed on each packet, wherein each pulse in the cluster of pulses has an amplitude that is proportional to an instantaneous amplitude of a major wave associated with the train of pulsed electrical packets, and wherein each pulse in the cluster of pulses has a frequency that is proportional to an instantaneous frequency of the major wave associated with the train of pulsed electrical packets (See FIG. 4, items 26, 28, 30 and disclosure related thereto, particularly col. 6, lines 1-9);

inputting the train of pulsed electrical packets to an electromagnetic induction circuit, the electromagnetic induction circuit emitting a magnetic field in response to the inputting (See Pigeon FIG. 4, items 20 and note disclosure related thereto);

using the magnetic fields to induce eddy currents in a material (See FIG. 4 and disclosure related thereto and col. 3, line 10 to col. 4, line 7); and

detecting the eddy currents in the material (See FIG. 4 and disclosure related thereto and col. 6, lines 10-55).

Regarding claim 4, Pigeon discloses a method for eddy current inspection, the method comprising:

generating a magnetic field corresponding to a train of pulsed packets, a cluster of pulses being superimposed on each packet, wherein each pulse in the cluster of pulses has an amplitude that is proportional to an instantaneous amplitude of a major wave associated with the train of pulsed electrical packets, and wherein each pulse in the cluster of pulses has a frequency that is proportional to an instantaneous frequency of the major wave associated with the train of pulsed packets (See FIG. 4, items 26, 28, 30 and disclosure related thereto, particularly col. 6, lines 1-9);

using the magnetic fields to induce eddy currents in a material (See FIG. 4 and disclosure related thereto and col. 3, line 10 to col. 4, line 7); and

detecting the eddy currents in the material (See FIG. 4 and disclosure related thereto and col. 6, lines 10-55).

Regarding claim 5, Pigeon discloses an apparatus for eddy current inspection, the apparatus comprising: an induction probe to receive a superlooped waveform measurement signal (See FIG. 3, item 12).

Regarding claim 6, Pigeon discloses the superlooped waveform measurement signal comprises a train of pulsed electrical packets, each packet comprising a cluster of pulses superimposed on each packet (See FIG. 4, items 26, 28, 30 and disclosure related thereto, particularly col. 6, lines 1-9).

Regarding claim 7, Pigeon discloses the train of pulsed electrical packets comprises at least one group of packets at a first concentration and at least a second group of packets at a second different concentration (See FIG. 4, items 26, 28, 30 and disclosure related thereto, particularly col. 6, lines 1-9. Note that two packets clusters are superimposed on one another at two frequencies).

Regarding claim 8, Pigeon discloses each cluster of pulses comprises at least one pulse at a first frequency and amplitude and at least another pulse at a different frequency and amplitude (See FIG. 4, items 26, 28, 30 and disclosure related thereto, particularly col. 6, lines 1-9. Note that two packets clusters are superimposed on one another at two frequencies).

### ***Response to Arguments***

Applicant's arguments filed October 31, 2008 have been fully considered but they are not persuasive.

Applicants' first assert that "Pigeon does not describe varying either the amplitude or frequency within the measurement signal as claimed". However, the claims do not contain nor require any variation of the amplitude or frequency and arguments thereto will not be considered until claimed.

Applicants next argue that Pigeon "does not disclose ... a train of pulsed electrical packets, a cluster of pulses being superimposed on each packet." However, this is precisely what Pigeon discloses. Pigeon takes a signal at a first frequency and "superimposes" a signal of a second frequency on this first signal (See FIG. 4, items 26, 28, 30 and disclosure related thereto, particularly col. 6, lines 1-9. Note that two packets clusters are superimposed on one another at two frequencies). This superimposition has the effect of laying one set of pulses, i.e., pulse packets, of a higher frequency over another set of pulses, pulse packets, of a lower frequency. This superimposition would provide a waveform similar to FIG. 3 of the present application.

The remaining features wherein "each pulse in the cluster of pulses has an amplitude that is proportional to an instantaneous amplitude of a major wave associated with the train of pulsed electrical packets, and wherein each pulse in the cluster of pulses has a frequency that is proportional to an instantaneous frequency of the major wave associated with the train of pulsed electrical packets" are either direct features of the signals disclosed in Pigeon or simply properties of the wave formed as a result of the superimposition of two frequency waves.

It is also noted that in both the specification at paragraphs 0023-0024, Applicants states that "[e]very wave necessarily incorporates smaller waves, and is contained by

larger waves. Thus each high-amplitude low-frequency major wave is modulated by many higher frequency low-amplitude minor waves". Accordingly, using Applicants own principles, even a single frequency wave is "necessarily" incorporated into and with other waves and thus, any one or all of the signals of Pigeon, i.e., waves, would necessarily be superwaves because each or all would be modulated minor waves.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **KENNETH J. WHITTINGTON** whose telephone number



is (571)272-2264. The examiner can normally be reached on Monday-Friday, 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Assouad can be reached on (571) 272-2210. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kenneth J Whittington/  
Primary Examiner, Art Unit 2862

kjw